



# PUBLIC NOTICE

FEDERAL COMMUNICATIONS COMMISSION

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**DA 05-487**

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## **WTB SEEKS COMMENT ON CMRS MARKET COMPETITION WT Docket No. 05-71**

**Comments Due: March 28, 2005**

**Reply Comments Due: April 12, 2005**

In 1993, Congress created the statutory classification of Commercial Mobile Services<sup>1</sup> to promote the consistent regulation of similar mobile radio services.<sup>2</sup> At the same time, Congress established the promotion of competition as a fundamental goal for Commercial Mobile Radio Services (“CMRS”) policy formation and regulation. To measure progress toward this goal, Congress required the Commission to submit annual reports (“*CMRS Reports*”) that analyze competitive conditions in the industry.<sup>3</sup>

This *Public Notice* solicits data and information in order to evaluate the state of competition among providers of CMRS for its Tenth Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services (“*Tenth Report*”). The statute requiring the Commission to submit annual reports providing an analysis of competitive market conditions with respect to CMRS stipulates that this analysis shall include, among other things, “an analysis of whether or not there is effective competition.”<sup>4</sup>

In this proceeding, the Wireless Telecommunications Bureau (the Bureau) seeks to update the indicators of competition for the next report to Congress and to assist in determining whether or not there is effective competition in the CMRS market. The Bureau seeks public input to facilitate this determination. Industry members, members of the public, and other interested parties should submit information, comments, and analyses regarding competition in the provision of CMRS. Commenters desiring confidential treatment of their submissions should request that their submission, or a specific part

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<sup>1</sup> The term “commercial mobile service” is defined by the Communications Act of 1934, as amended (“the Act”), as “any mobile service . . . that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by the Commission.” Communications Act § 332(d)(1), 47 U.S.C. § 332(d)(1). “Mobile service” is defined at Section 3 of the Act. Communications Act § 3(27), 47 U.S.C. § 153(27). The term “commercial mobile service” came to be known as the “commercial mobile radio service” (“CMRS”). 47 C.F.R. § 20.3.

<sup>2</sup> The Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, § 6002(b), amending the Communications Act of 1934 and codified at 47 U.S.C. § 332(c).

<sup>3</sup> 47 U.S.C. § 332(c)(1)(C).

<sup>4</sup> *Id.*

thereof, be withheld from public inspection.<sup>5</sup> In order to facilitate its analysis of competitive trends over time, the Commission requests that parties submit current data as well as historic data that are comparable over time.

This *Public Notice* follows the format of the Ninth Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services (“*Ninth Report*”), which used a framework that grouped indicators into four categories: (1) market structure; (2) carrier conduct; (3) consumer behavior; and (4) market performance. For purposes of this *Public Notice*, the Bureau focuses its inquiry on the mobile telephone sector, with particular emphasis on wireless operators that are integrated providers of both interconnected mobile voice and mobile data services. In addition to the issues discussed below, the Bureau seeks comment on which indicators are useful for analyzing competitive market conditions with respect to CMRS, and also on what specific criteria should be used to determine whether there is effective competition among CMRS providers.

## **I. Mobile Telecommunications Market Structure**

The Bureau’s analysis of market structure will focus on the current level of concentration and the ease or difficulty with which new providers can enter the market. The Bureau invites commenters to address the sources of data and the analysis of metrics relating to both aspects of market structure in the sections below.

### **A. Service Availability and Deployment**

#### **1. Service Deployment and Coverage Maps**

The Bureau asks service providers to submit as part of their comments, in electronic format, the coverage maps that they already make available to the public. Specifically, the Bureau requests carriers to submit as part of their comments the maps they employ to advertise their coverage areas in brochures and on their web sites in a geo-referenced, mapable format, such as MapInfo table (.tab), Tagged Image Format (.TIF), or Shapefile (.shp) files. In the alternative, the Bureau asks carriers to provide a list of counties where they provide facilities-based services. The Bureau uses the contours filed by 800 MHz cellular licensees to estimate the availability of analog mobile telephone service, and therefore does not require additional maps showing analog coverage from cellular licensees.<sup>6</sup> However, the Bureau requests that cellular licensees submit, as part of their comments, their publicly available maps in the aforementioned formats showing where they offer reliable digital service, or else supply lists of counties in which the service is offered. In addition to employing more accurate coverage maps, the Bureau seeks comment on other ways its analysis of service availability can be improved.

The Bureau seeks information on whether carriers market service to new customers in all of the geographic areas in which they have coverage. Do carriers provide coverage in certain areas, such as near major roads, where they do not market service to residents of those areas? If this is true, could the Bureau’s analysis be further improved if carriers indicated the parts of their coverage areas in which they compete to offer new service and the parts that are used only to provide coverage to traveling subscribers based in other locations? Also, in what respect do infrastructure sharing agreements, such as those between carriers along highways in low-population areas, affect service availability in rural areas? Do

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<sup>5</sup> 47 C.F.R. § 0.459.

<sup>6</sup> Cellular licensees have submitted maps of their service contours as part of the filings required to establish Cellular Geographic Service Area (“CGSA”) boundaries. See 47 C.F.R. §§ 22.947(c), 22.953(a)(1)-(2).

such agreements effectively increase the number of competitors in those areas? Do these arrangements increase wireless usage in areas adjacent to such areas?

## **2. Mobile Data Deployment**

The Bureau seeks comment on deployment of newer network technologies such as CDMA2000 1X and 1xEV-DO, General Packet Radio Service (“GPRS”), Enhanced Data Rates for GSM Evolution (“EDGE”), and Wideband CDMA (“WCDMA”, also known as Universal Mobile Telecommunications System, or “UMTS”). The Bureau is particularly interested in changes that have occurred in such deployment since the *Ninth Report*. For example, in what portion of their license and network footprints have carriers deployed these technologies, and what advanced wireless applications are being offered using these technologies? Are the same types of advanced services available in all areas, and in particular, does the availability of advanced services vary between urban and rural areas? Specifically, the Bureau requests carriers to submit as part of their comments the maps they employ to advertise their mobile data coverage areas in brochures and on their web sites in a geo-referenced, mapable format, such as MapInfo table (.tab), Tagged Image Format (.TIF), or Shapefile (.shp) files, and to indicate on these maps the type of mobile data services being offered at each location. In the alternative, the Bureau asks carriers to provide a list of counties where they provide mobile data services.

### **B. Horizontal Concentration**

#### **1. NRUF Data and Output Market Concentration**

The main source of data the Bureau uses to calculate output market concentration statistics for the purpose of this report is the Numbering Resource Utilization / Forecast (NRUF) data that are submitted to the Commission on a rate center basis.<sup>7</sup> Are the NRUF data a reasonable proxy for output in the mobile telephone market? The Bureau also seeks comment on how to determine which geographic area or areas should be used to calculate mobile telecommunications concentration measures based on NRUF data. In particular, the Bureau seeks comment on the appropriateness of various geographic market delineations given the limitations of the NRUF data.

#### **2. Mobile Data Subscriber Shares**

One limitation of NRUF data for the purpose of measuring concentration levels in the mobile data market is that they do not reveal whether mobile telephone subscribers use their handsets for mobile data services as well as to make and receive calls. We request sources of information on the number of mobile data subscribers that individual carriers serve, or the percentage of their customer base that uses mobile data services as well as mobile voice. Do individual carriers’ mobile data market shares differ significantly from their mobile telephony market shares, and if so, to what extent?

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<sup>7</sup> Rate center boundaries are much smaller than, and not coextensive with, mobile telecommunications license boundaries such as Cellular Market Areas (“CMAs”), Metropolitan Trading Areas (“MTAs”), or Basic Trading Areas (“BTAs”). Due to their relatively small size, rate centers are not necessarily indicative of where a mobile telecommunications subscriber lives, works, or uses a mobile telecommunications device. In addition, in order to protect the confidentiality of the companies submitting NRUF data, the Commission does not report the number of subscribers for geographic areas in which there are three or fewer carriers.

### **C. Consolidation and Exit**

The Bureau seeks comment on the effects of consolidation in the mobile telecommunications market. Are the effects of consolidation different for mergers and acquisitions, swaps, joint ventures, and bankruptcies? Has consolidation affected mobile data services differently than mobile telephone services? Has consolidation affected rural areas differently than urban areas?

### **D. Barriers to Entry<sup>8</sup>**

Barriers to entry in the mobile telecommunications market may include first-mover advantages, large sunk costs, and access to spectrum.<sup>9</sup> The Bureau seeks comment on these and other types of barriers to entry in the mobile telecommunications market. What are the most significant barriers to entry in the mobile telecommunications market? Are barriers to entry different in rural and urban areas?

The Bureau seeks comment on whether there is access to sufficient spectrum, either through Commission auctions or through secondary market transactions, to prevent spectrum from becoming a significant barrier to entry in the CMRS industry. Are existing service providers spectrum constrained? If so, in which geographic markets are carriers most likely to be constrained? Have these carriers become more spectrum constrained after rolling out advanced wireless services? Do potential entrants have sufficient opportunities to access spectrum? As advanced wireless technologies become more prevalent, will potential entrants have more or fewer opportunities to access spectrum? The Bureau seeks comment on whether its policy to facilitate spectrum leasing, combined with future spectrum auctions such as that for Advanced Wireless Services,<sup>10</sup> will provide sufficient opportunities both for existing carriers to expand their operations and for new mobile telecommunications providers to enter the market. Are there other barriers that limit access to spectrum?

### **E. Other Issues**

#### **1. Rural Markets**

To obtain a better understanding of the state of competition below the national level, and particularly in rural areas, the Bureau requests comment on the extent of mobile voice and data competition in rural areas. Are there noteworthy trends in rural competition?

#### **2. Resale Providers**

To what extent are resellers creating competitive pressures in the mobile telecommunications sector? Who are the major resellers in the United States? How many subscribers do they have? From the

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<sup>8</sup> *DOJ/FTC Guidelines* at § 3.0. For a discussion of barriers to entry, see Dennis W. Carlton and Jeffrey M. Perloff, *Modern Industrial Organization*, 76-82 (3<sup>rd</sup> ed., Addison, Wellsley, Longman, Inc., 1999). The cost of capital is the firm's cost of funds provided by creditors and shareholders. A firm's cost of capital is the cost of its long-term sources of funds: debt, preferred stock, and common stock. The cost of each source reflects the risk of the assets in which the firm invests.

<sup>9</sup> See 2000 Biennial Review Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, Report and Order, 16 FCC Rcd 22668, 22688-91 (2001).

<sup>10</sup> Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25,162 (2003).

consumer's perspective, what are the benefits of buying from a reseller versus a facilities-based provider? Are resellers selling to specific demographic segments?

## **II. Carrier Conduct in the Mobile Telecommunications Market**

### **A. Price Rivalry**

To what extent do new types of pricing plans reflect price rivalry among CMRS providers? What are the major innovations that have occurred with pricing plans since the *Ninth Report*? Have these pricing innovations spread throughout the mobile telecommunications market or have they been limited to a subset of carriers? In addition, the Bureau seeks comment on the extent to which carriers in their pricing plans differentiate between data services offered over 2G networks and those offered over more advanced wireless service networks. Have pricing innovations been more widely adopted in the last year? The Bureau seeks information on which carriers offer nationwide pricing plans, particularly those that are not typically described as being nationwide operators, and request descriptions of the terms of such plans.

### **B. Capital Expenditures**

Have capital expenditures by mobile telecommunications providers increased or decreased since the *Ninth Report*? Are there any studies or analyst reports on the capital expenditures of nationwide carriers versus regional/local providers? Does data exist on capital expenditures by geographic region?

### **C. Technology Deployment and Upgrades**

For the *Tenth Report*, the Bureau requests information on the extent to which mobile telecommunications carriers are continuing to upgrade their networks to more advanced technologies such as EDGE, WCDMA, high-speed downlink packet access ("HSDPA"), and 1xEV-DO or DV. How extensively are carriers planning to deploy more advanced technologies (e.g., will carriers focus on urban areas only, or will they deploy these technologies in rural areas as well)? With regard to GSM-based carriers, the Bureau asks to what extent carriers are planning to upgrade their systems to EDGE, WCDMA, HSDPA, or some other technology. With regard to CDMA-based carriers, to what extent are they planning to continue upgrading their networks to include 1xEV-DO or 1xEV-DV? What, if any, are the relative advantages and disadvantages of WCDMA versus CDMA2000, and what is the likely future impact of such differences on competition between GSM-based carriers and CDMA-based carriers and, more generally, competitive market conditions in the mobile telephone sector? Are there other new wireless technologies that will improve wireless providers' coverage, capacity and/or service offerings for mobile telecommunication services? In addition, to what extent are providers integrating their mobile telephone network technologies with high-speed wireless local area network technologies such as Wi-Fi, with the aim of offering seamless mobile data services?

### **D. Roaming**

The Bureau also seeks data on the availability of roaming. To what extent do carriers have agreements that enable their customers to use automatic roaming throughout the United States? Are there geographic areas in which some carriers do not have automatic roaming agreements? Specifically, where are those areas, and is the absence of automatic roaming agreements related to the number of wireless providers operating in those areas? To what extent are customers forced to use manual roaming? Where are those customers located when they use manual roaming, and how frequent is their usage? How has the deployment of mobile data services affected the provision of roaming service? Are consumers able to

access mobile data services when roaming? Are there significant trends in roaming prices for carriers or subscribers?

### **III. Consumer Behavior in the Mobile Telecommunications Market**

#### **A. Access to Information**

The Bureau seeks comment on the development of consumer information sources for the mobile telecommunications market. Are there new avenues for consumers to gain information, such as retailers providing on-line and in-store comparisons of pricing plans, services, and handsets?

#### **B. Switching and Churn**

The Bureau asks carriers to submit descriptions of how they calculate churn. Do the differences in how churn is calculated prohibit a meaningful comparison of churn figures across the wireless industry? How reliable are prior churn estimates? Are there other sources of churn data available that should be included in the *Tenth Report*? Further, the Bureau seeks sub-national or regional churn data, and churn data by demographic groups. Have the previous reasons consumer churn, namely service cost and network quality, remained the same? If not, what are the reasons for consumer churn? Since the *Ninth Report*, has there been a change in the churn rate? If there has been a change, what is the magnitude of this change? Has local number portability (“LNP”) affected wireless customer churn rates? If so, has the effect been significant?

### **IV. Mobile Telecommunications Market Performance**

The Bureau intends to analyze various metrics including pricing levels and trends, subscriber growth and penetration, Minutes of Use (“MOU”), innovation and diffusion of services, and quality of service. Are there any other metrics that would add to its analysis of the mobile telecommunications market? Are these metrics available on a national or sub-national level?

#### **A. Pricing Levels and Trends**

##### **1. Pricing Trends**

The Bureau seeks comment on the use of available pricing estimates as a tool in its analysis of the performance of the mobile telephone market, including to what extent any observed price decreases are evidence of effective competition. Are there additional analyses that can be performed or conclusions that can be drawn from new or existing pricing data? The Bureau also seeks comment and information on pricing trends for mobile data services offered by mobile telephone carriers. Are there data on the pricing of these services available on a national or sub-national level? How are new or enhanced mobile data services such as location-based services, games, digital photos and downloadable music priced? Are there any reports or analyses that discuss pricing trends for mobile data services?

##### **2. Pricing in Rural Areas**

Are commenters aware of pricing studies that look at urban versus rural or other sub-national mobile telecommunications pricing? The Bureau asks for information on whether there are meaningful pricing differences between urban and rural areas. To the extent that such differences exist, what are the reasons for such differences? Should additional analyses on the differences between urban and rural mobile telecommunications pricing be performed? Given the scarcity of studies that provide direct

information on pricing, the Bureau is interested in finding alternative ways of determining whether pricing in rural areas conform to national pricing plans. Are there other ways of studying this issue? Are there existing studies or data sets that would give us the ability to explore this issue?

### **3. Average Revenue Per Unit (ARPU)**

Average monthly revenue per subscriber is another key metric presented in past *CMRS Reports*. The Bureau seeks comment on the use of ARPU as a metric in its analysis of the mobile telecommunications industry. Are additional ARPU data available that should be considered, in particular data depicting whether and how ARPU varies by region and/or demographic group? Are there additional analyses that can be performed or conclusions that can be drawn from new or existing data? The Bureau requests from commenters additional input on the possible causes for any recent trends in ARPU, as well as additional data that may support various hypotheses.

#### **B. Quantity of Services Purchased**

##### **1. Subscriber Growth**

Since the *Seventh Report*, the Bureau has estimated the number of subscribers in the United States by using NRUF data. NRUF data, however, do not include demographic information. Therefore, the Bureau requests information on subscribers that would assist in a greater understanding of the mobile telecommunications inventory, such as penetration rates by age groups and/or household penetration rates.

The Bureau asks for comment on how to determine which geographic area or areas should be used to calculate mobile telecommunications subscribership and penetration rates.<sup>11</sup> The Bureau requests comment on the appropriateness of using Economic Areas (EAs) for such calculations.<sup>12</sup> Would other geographic areas be appropriate to use in place of or in addition to EAs, such as states, MTAs, BTAs, CMAs, or counties? In addition, are there other ways to interpret existing national and sub-national subscribership data for purposes of the *Tenth Report*? Also, are there data on either a national or sub-national basis on the number of mobile telecommunications customers that use mobile data services?

##### **2. Minutes of Use**

The Bureau seeks comment on the use of MOUs as an indicator of the demand for mobile telecommunications services. For purposes of the *Tenth Report*, the Bureau asks for comment on the sources of the MOU data presented in the *Ninth Report* and requests additional MOU data. In addition, should the Bureau perform other analyses or draw additional conclusions from new or existing data? The Bureau requests data on MOUs on a sub-national basis and/or broken down by various demographic groups.

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<sup>11</sup> The use of any geographic area to calculate mobile telecommunications subscribership and penetration rates for purposes of this report does not imply that the same geographic area will be used in any other Commission proceedings to define the relevant geographic markets. Such proceedings could include an application for a license transfer and may present facts pointing to a narrower or broader geographic market definition than any used, suggested, or implied in the *CMRS Reports*.

<sup>12</sup> EAs are defined by the U. S. Department of Commerce's Bureau of Economic Analysis. See Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Radio Services, *Seventh Report*, 17 FCC Rcd 12985, 13005 n.122.

### **C. Quality of Service**

The Bureau seeks comment on service quality in the mobile telecommunications market. Do commenters recommend any particular consumer surveys on service quality in the mobile telecommunications market? How reliable are the data collected from these consumer surveys? What other sources provide information on service quality in the mobile telecommunications market, and how reliable are these sources? The Bureau also seeks comment on whether LNP affects the quality of services offered by mobile telephone carriers.

### **V. Wireless – Wireline Competition**

The Bureau asks for comment and sources of information on the extent to which mobile telephone service competes with wireline service. Has the introduction of intermodal LNP affected consumer behavior or had any impact on wireless-wireline competition? Are there any other new developments in wireless-wireline competition that have occurred since the *Ninth Report*? What are the major reasons for these developments?

### **VI. Procedural Matters**

Interested parties may file comments no later than March 23, 2005. Reply comments are due April 12, 2005. All filings should refer to WT Docket No. 05-71.

Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998). Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/cgb/ecfs/>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and should include the following words in the body of the message, "get form." A sample form and directions will be sent in reply. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). The Commission's contractor, Natek, Inc. will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002.

- The filing hours at this location are 8:00 a.m. to 7:00 p.m.
- All hand deliveries must be held together with rubber bands or fasteners.
- Any envelopes must be disposed of before entering the building.

-Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

-U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12<sup>th</sup> Street, SW, Washington, D.C. 20554.

-All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

Three (3) copies of the comments and reply comments should also be sent to the Spectrum Competition & Policy Division, Wireless Telecommunications Bureau, 445 12<sup>th</sup> Street, SW, Washington, D.C. 20554, Attn: Heidi Kroll. Parties shall also send one copy to Best Copy and Printing, Inc., Portals II, 445 12<sup>th</sup> Street, SW, Room CY-B402, Washington, D.C. 20554, (800) 378-3160, or via e-mail to [Joshir@erols.com](mailto:Joshir@erols.com).

Comments filed in response to the Public Notice are available for public inspection and copying during business hours in the FCC Reference Information Center, Portals II, 445 12<sup>th</sup> Street SW, Room CY-A257, Washington, D.C. 20554. The comments may also be purchased from Best Copy and Printing, Inc., telephone (800) 378-3160, facsimile (301) 816-0169.

For further information, contact Heidi Kroll, Spectrum Competition & Policy Division, Wireless Telecommunications Bureau, (202) 418-1310.